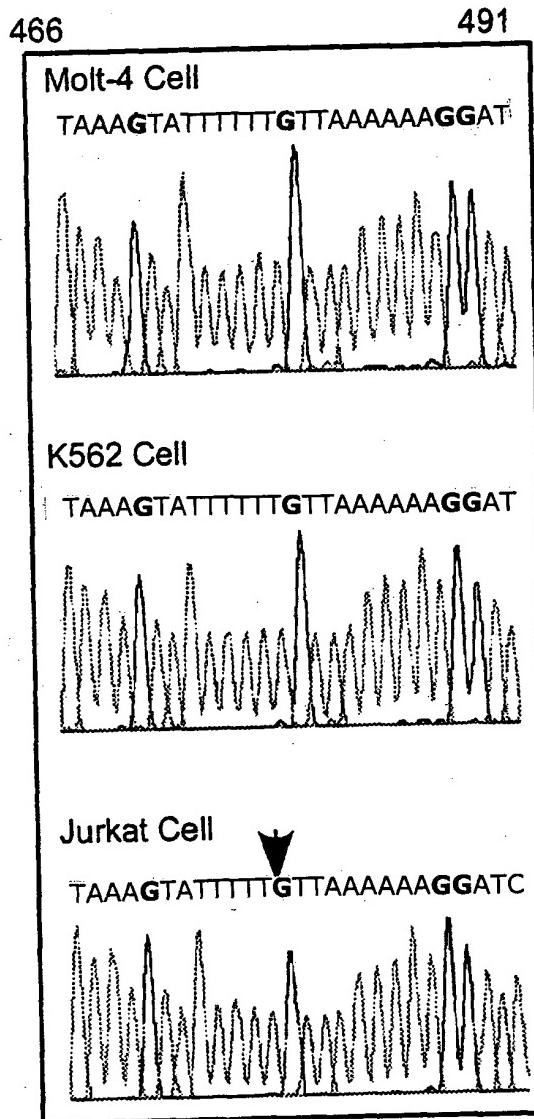


GAAAATGCTTCTGAAGCAGCTCCCTTTGAGGGGTGTGATGCTTGTGACCATTTCTGCTTAGGACACATTAGGATCTGGTCATGGAAATAAGAATGCACAC	119
M L S E S S F L K G V M L G S I F C A L I T M L G H I R I G H G N R M H H	38
<hr/>	
CATGAGCATCATCACCTACAAGCTCCATCAAAGAAGATATCTGAAATTCAAGGATGAGGGATGAGGGCATGGCTCAGTAAGAGCTTTCGAGTAACTCTTATTATCCTTGAAACCCAAA	239
H E H H L Q A P N K E D I L K I S E D E R M E L S K F R V Y C I I L V K P K	78
<hr/>	
GATGTGAGTCCTGGGCTGCACTAACAGGAGACTTGACCAAAACACTGTGACRAAGCAGAGTTCTCAGITCTGAAATGTTAAAGTGTGTTGAGTCATTAAATATGGACACAAATGACATG	359
D V S L W A A V K E T W T K H C D K A E F F S S E N V K V F E S I N M D T N D M	118
<hr/>	
TGGTTAATGTGAGAAAAGCTTACAACTAACAGCCTTGATAAGTATAGAGCCTTACAAACTGGGTTCTGCTTGACGCCCAACTACAGTTGCTTATCATGAAACCTTAAGTATTGTTG	479
W L M M R K A Y K A F D K Y R D Q Y N W F F L A R P T T F A I I E N L K Y F L	158
<hr/>	
TAAAAAAGGGATCCATCACAGCCTTCTCATCTAGGCCACACTATAAAATCTGGAGACCTTGAATATGGGGTATGGAGGGAAATTTGCTTAAGTGTGAAATCAATGAAARGACTTAAC	599
L K D P S Q P F Y L G H T I K S G D L E Y V G M E G G I V L S V E S M K R L N	198
<hr/>	
AGCTCTCTCAATATCCCAGAAAAGTGTCTGAAACAGGGAGGGATGATTGGAGAGATATCTGAAGATAAACAGCTAGCAGTTGCCTGAAATATGCTGGAGTATTGAGAAATGCGAGAA	719
S L L N I P E K C P E Q G G M I W K I S E D K Q L A V C L K Y A G V F A E N A E	238
<hr/>	
GATGCTGATGGAAAAGATGTTAAATACCAAAATCTGTTGGCTTCTATTAAGAGGCAATGACTTACCCCAACAGGTAGTAGAAGGGTATGGCTGTTACTTT	839
D A D G K D V F N T K S V G L S I K E A M T Y H P N Q V V E G C C S D M A V T F	278
<hr/>	
ATGGACTGACTCCAATCAGATGCACTGGCATGATGATGATGTTACATGGGCAATTGGGCTATACCGGGTATGGGCTATGGGCAATTGGTCTGACAATGAC	959
N G L T P N Q M H V M Y G V R L R A F G H I F N D A L V F L P P N G S D N D	318
<hr/>	
TGAGAGTGGTAGAAAAGCGTGAATATGATCTTGTATAGGACCTGCTGTCATTATTGAGTAGTAACTACATCAATACA	1045

**FIG. 1A**

\*



**FIG. 1B**

## Human K562 cells and Molt-4 Cells

466 -T-A-A-A-G-T-A-T-T-T-T-T-G-T-T-A-A- 483  
           K            V            F            L            L

## Human Jurkat Cells

**FIG. 1C**

The diagram illustrates the structure of two proteins: Wild-type Cosmc-1 and Mutated Cosmc-1 (Jurkat). Both proteins are represented as horizontal bars. The left end of each bar is labeled 'N' and the right end is labeled 'C'. A vertical arrow points upwards from the N-terminus of the Wild-type Cosmc-1 bar, with the label 'TMD' positioned below it. The Wild-type Cosmc-1 structure features a hatched box at its N-terminus, followed by a vertical line with diagonal hatching, and then a long segment with horizontal hatching. The Mutated Cosmc-1 (Jurkat) structure is identical in all segments except for the N-terminus, which consists of a solid black box followed by a vertical line with diagonal hatching.

FIG. 1D

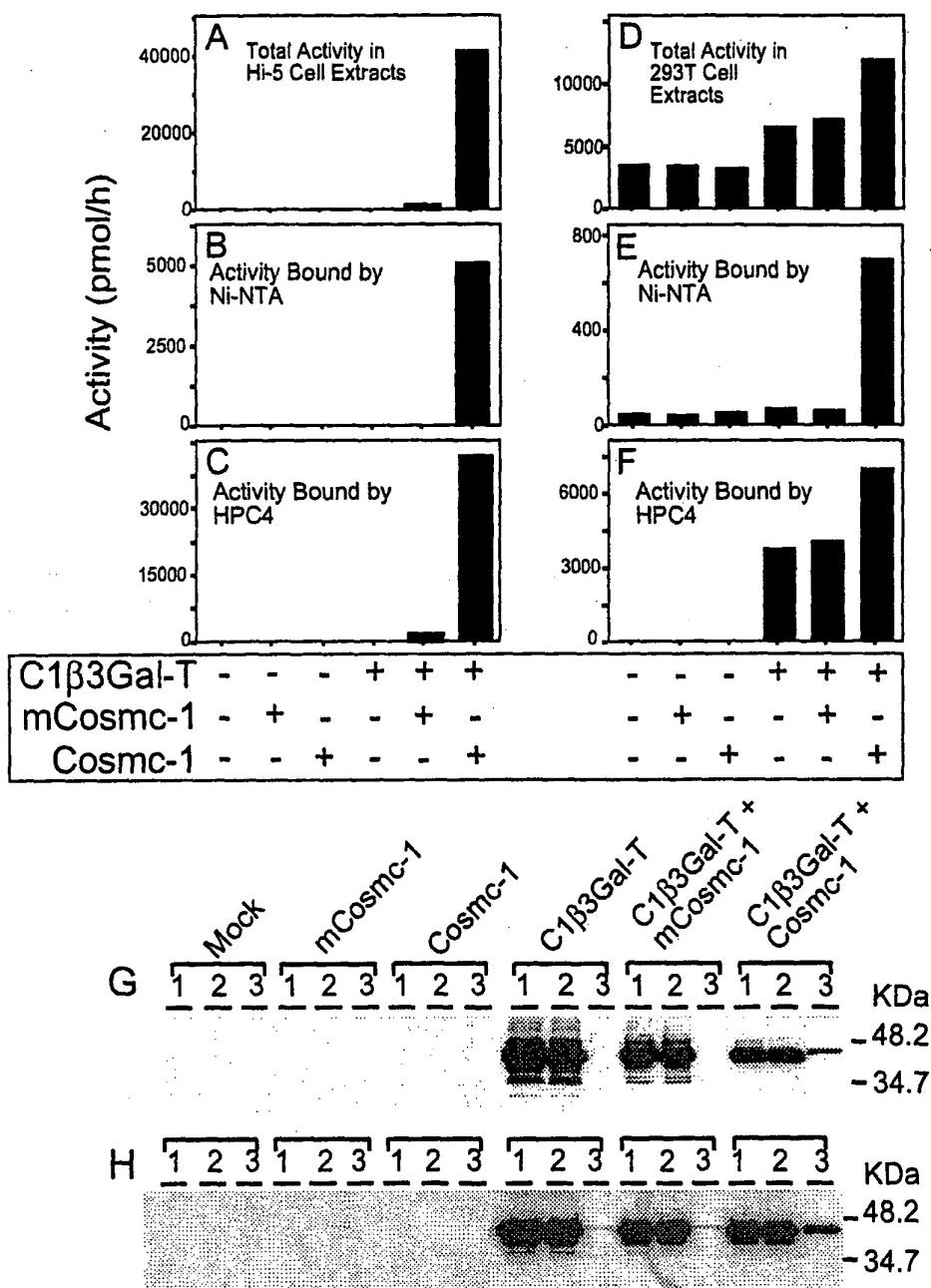
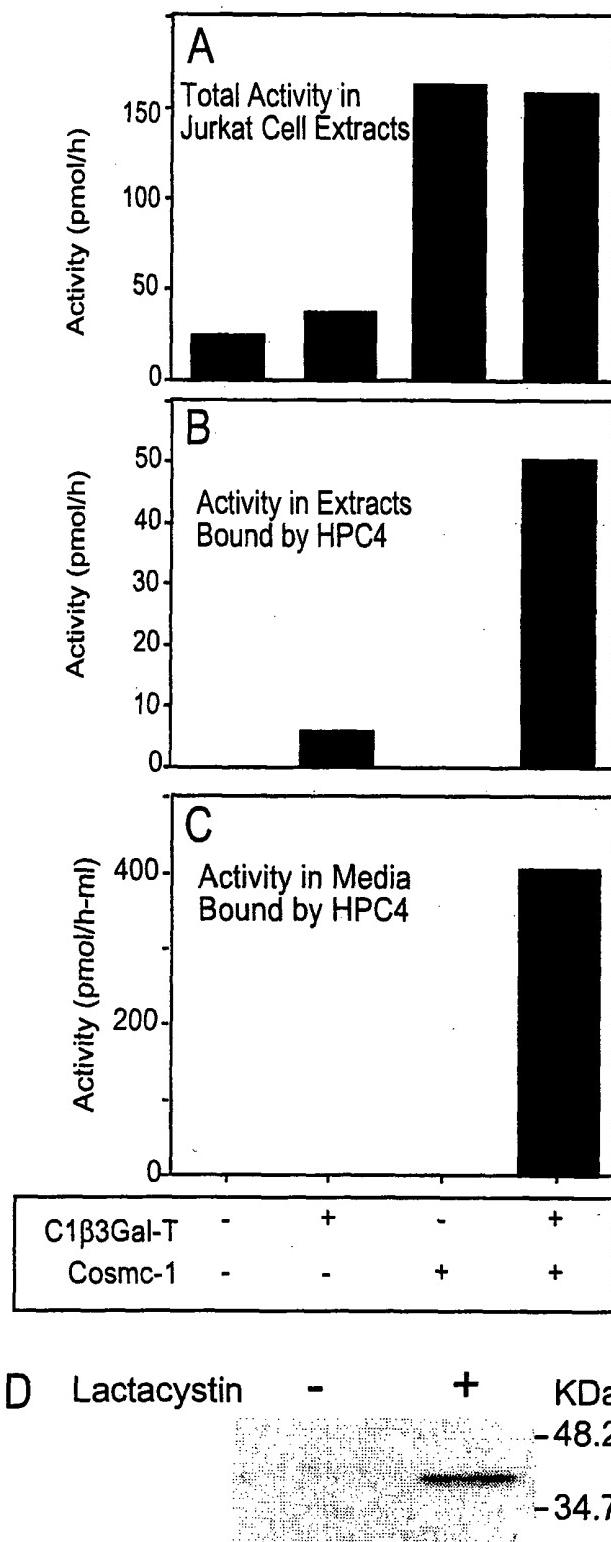
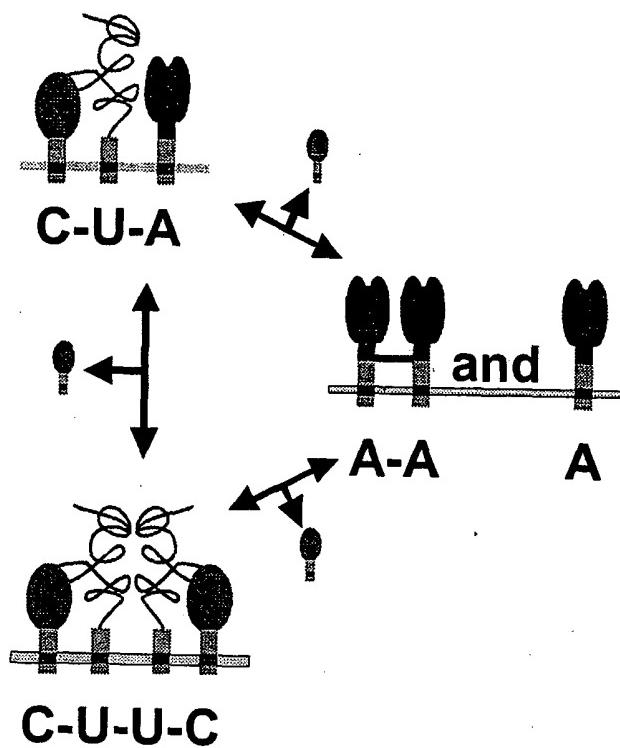


FIG. 2



**FIG. 3**



	<b>A = Active C1<math>\beta</math>3GalT</b>
	<b>U = Inactive C1<math>\beta</math>3GalT</b>
	<b>C = Cosmc-1</b>

**FIG. 4**

FIG. 5

## ClustalW Formatted Alignments

Express Mail No.: EV272908833US Deposited: 09/12/2003  
Title: CORE 1-63-GALACTOSYLMANOSYLTRANSFERASE SPECIFIC  
MOLECULAR CHAPERONES, NUCLEIC ACIDS, AND METHODS  
OF USE THEREOF  
Inventors: Richard D. Cummings et al. Group: Unknown  
Filed: Herewith Examiner: Unknown  
Agent: Christopher W. Corbett Dkt. No.: 7148.003  
SHEET 7 OF 7 Formal Drawing

<i>H. sapiens</i>	1	M L S E S S S F L K G V M L G S I F C A L I T M L G H I R I G H G N R M H H E	40
<i>R. norvegicus</i>	1	M L S E S S S F L K G V M L G S I F C A L I T M L G H I R I G H G N R M H H E	38
<i>M. musculus</i>	1	M L S E S S S F L K G V M L G S I F C A L I T M L G H I R I G H G N R M H H E	38
<i>Danio rerio</i>	1	M M S E G S S F M K G M I L G G I F C L I M S F F E T F N P G T H S E G H N H L	40
<i>H. sapiens</i>	41	H H H L Q A P N K E D I L K I S E D E R M E L S K S F R V Y C I I L V K P K D V	80
<i>R. norvegicus</i>	39	H H H L Q A P N K D D I L K I S E T B R M E L S K S F Q V Y C I V L V K P K D V	78
<i>M. musculus</i>	39	H H H L Q A P N K D D I S K I S E A B R M E L S K S F R V Y C I V L V K P K D V	78
<i>Danio rerio</i>	41	H H H L K P V S K D E L Q K L S E S Q M S E F A M Q V R V Y C I L M V T P K E L L	80
<i>H. sapiens</i>	81	S L W A A V K E T W T K H C D K A E F F S S E N V K V F E S I N M D T N D M W L	120
<i>R. norvegicus</i>	79	S L W A A V K E T W T K H C D K A E F F S S E N V K V F E S I N M D T N D M W L	118
<i>M. musculus</i>	79	S L W A A V K E T W T K H C D K A E F F S S E N V K V F E S I N M D T N D M W L	118
<i>Danio rerio</i>	81	V H W A T A N D T W S K H C D K S V F Y T S E A S K A L D A V D L Q . E Q D E W T	120
<i>H. sapiens</i>	121	M M R K A Y K Y A F D K Y R D Q Y N W F F L A R P T T F A L I E N L K Y F L L K	160
<i>R. norvegicus</i>	119	M M R K A Y K Y A Y D K Y K D Q Y N W F F L A R P T T F A V I E N L K Y F L L R	158
<i>M. musculus</i>	119	M M R K A Y K Y A Y D Q Y R D Q Y N W F F L A R P T T F A V I E N L K Y F L L K	158
<i>Danio rerio</i>	121	R L R K A I Q H A Y E N A G D L H - W F F T I A R P T T F A T I E N L K Y L V L D	159
<i>H. sapiens</i>	161	K D P S Q P F Y L G H T I K S G D L E Y V G M E G G I V L S V E S M M K R L N S L	200
<i>R. norvegicus</i>	159	K D P S Q P F Y L G H T V K S G D L E Y V S V D G G I V L S I E S M M K R L N G L	198
<i>M. musculus</i>	159	K D Q S Q P F Y L G H T V K S G D L E Y V S V D G G I V L S I E S M M K R L N S L	198
<i>Danio rerio</i>	160	K D P S Q P F Y T G H T E K S G E L D Y V E Y D S G I V L S Y E A M R R L M E V	199
<i>H. sapiens</i>	201	L N I P E K C P E Q G G M I W K I S E D K Q L A V C L K Y A G V F A E N A E D A	240
<i>R. norvegicus</i>	199	L S V P E K C P E Q G G M I W K I S E D K Q L A V C L K Y A G V F A E N A E D A	238
<i>M. musculus</i>	199	L S V P E K C P E Q G G M I W K I S E D K Q L A V C L K Y A G V F A E N A E D A	238
<i>Danio rerio</i>	200	F K D E D K C P E R G R A L W K M S E E K Q L A T C L K Y S G V F A E N G E D A	239
<i>H. sapiens</i>	241	D G K D V F N T K S V G L S I K E A M T Y H P N Q V V E G C C S D M A V T F N G	280
<i>R. norvegicus</i>	239	D G K D V F N T K S V G L F I K E A M T N Q P N Q V V E G C C S D M A V T F N G	278
<i>M. musculus</i>	239	D G K D V F N T K S V G L F I K E A M T N Q P N Q V V E G C C S D M A V T F N G	278
<i>Danio rerio</i>	240	Q G K G L F N K K S V S S L I S D S I S Q N P G D V V E A C C S D M A I T F A G	279
<i>H. sapiens</i>	281	L T P N Q M H V M M Y G V Y R L R A F G H I F N D A L V F L P P N G S D N D	318
<i>R. norvegicus</i>	279	L T P N Q M H V M M Y G V Y R L R A F G H V F N D A L V F L P P N G S E N D	316
<i>M. musculus</i>	279	L T P N Q M H V M M Y G V Y R L R A F G H V F N D A L V F L P P N G S E N D	316
<i>Danio rerio</i>	280	M S P S Q I Q V L M Y G V Y R L R P Y G H D F H D S L T F L P P R L	313